

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### Carbide Products, Inc.

#### Kentucky Manufacturing Assistance Center

#### Carbide Products Gains Efficiency and Floor Space by Implementing 5S

##### Client Profile:

Carbide Products, Inc., established in 1943, specializes in made-to-order products manufactured from a wide range of materials that include solid tungsten carbide, carbide tipped, high-speed and tool steel, stainless steel, super alloys, cast iron, other ferrous and non-ferrous alloys, heavy metals, plastics such as delrin and nylon and practically any other material that can be machined. All machining processes as well as heat treating, brazing, assembly, inspection and documentation are performed in-house to ensure quality control. The family owned and operated business employs 38 people at its facility in Georgetown, Kentucky.

##### Situation:

Having grown the business and expanded its production capabilities, Carbide Products found itself running out of manufacturing space. The new machines and processes that were brought into the facility over the years were not well integrated into the layout and process flow. Due to the space constraints, Carbide Products was limited in its ability to add additional high tech machining equipment and create flexible work centers. Carbide Products' management asked Kentucky Manufacturing Assistance Center (KMAC), a NIST MEP network affiliate, for assistance with achieving its goal of increasing usable floor work space without having to expand its current facilities or purchase/build a larger facility.

##### Solution:

KMAC utilized the 5S (Sort, Set in Order, Shine, Standardize, Sustain) Lean manufacturing methodology to help Carbide Products personnel identify and then eliminate non value-added activities from their processes. KMAC Lean experts trained Carbide Products operators, supervisors and managers in 5S. Then they helped Carbide Products' personnel apply these 5S methods to their own production processes helping to eliminate wasted effort, movement and downtime. Finally, KMAC experts worked with Carbide Products' management to establish programs to help the company sustain the gains that had been achieved and adopt a continuous improvement approach for the future.

##### Results:

- \* Retained sales of \$50,000.
- \* Realized \$10,000 in cost savings.
- \* Achieved cost avoidance of \$1.5 million.
- \* Increased customer satisfaction.

##### Testimonial:

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"With KMAC's help and guidance, we have implemented 5S and, as a result, have improved our process flow and responsiveness to our customers and continue to reduce unnecessary movement in our operations. Most significantly, by implementing 5S we have been able to avoid the capital investment in a new building. We have embraced 5S and believe that our commitment to it will be critical to our future success."

Daniel W. Siegel, Plant Manager